

02/10/06
11/11/06

CLAIM AMENDMENTS

1-27. (canceled)

28. (previously presented): A method to identify an antagonist of a T-type calcium channel which method comprises:

- a) contacting a recombinant cell expressing the α_1 subunit of a heterologous T-type calcium channel with a known agonist of said T-type calcium channel;
- b) contacting said cell with a compound to be tested; and
- c) determining the ability of said compound to diminish the activation of said α_1 subunit by said agonist;

wherein said α_1 subunit is functional as a T-type calcium ion channel and is encoded by a nucleotide sequence which hybridizes under conditions of stringency corresponding to washing at 62° C in 0.2 x SSPE/0.1% SDS to a nucleic acid comprising SEQ ID NO: 23 and

wherein said activating comprises enhancing the flow of calcium ions into said cell in the presence as compared to the absence of said agonist;

whereby a compound which diminishes the activation of said α_1 subunit by said agonist is identified as an antagonist.

29. (previously presented): The method of claim 28 wherein said activation is measured by measuring the current through the calcium channel before and after said contacting of said cell with said compound.

30. (previously presented): The method of claim 28, wherein said cells contain a fluorescent dye sensitive to intracellular calcium concentration and said activation is determined by observing a change in the fluorescence of said dye when said contacting is performed.